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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,889	08/27/2002	Mark E. Addis	EH-10407	7967

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EXAMINER

PICKARD, ALISON K

ART UNIT	PAPER NUMBER
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3676

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/064,889

Applicant(s)

ADDIS, MARK E.

Examiner

Alison K. Pickard

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE of 5-26-04.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 14-53 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 14, 15, 24, 25, 44 and 45 is/are allowed.
6) ☒ Claim(s) 1-8, 16, 17, 20-23, 26-33, 38, 39, 47, 48 and 50 is/are rejected.
7) ☒ Claim(s) 18, 19, 34-37, 40-43, 46, 49 and 51-53 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-6, 8, 21-23, 26, 29-33, and 39 are rejected under 35 U.S.C. 102(e) as being anticipated by Ingistov.

Ingistov discloses a brush seal assembly for and method of sealing a gap between a first component and a second component in a gas turbine. The assembly comprises a body 32” (for example, see Fig. 6), bristles 102 extending from the body in a direction, and an extension (i.e. left side of body 32”) from the body wherein the extension has an elongated slot 116. The slot allows the assembly to float within the gap along the direction. The bristles are secured to the body 32” in that they are prevented from being displaced from the body via components such as 108 and 130 (or even 114 and 128). As seen in Figure 6, the body’s extension has a first radial section (i.e. portion nearest line 117) and a second, axial section (i.e. legs of the U-shape near lines 122) that defines the slot 116. The slot is also elongate transverse to its depth. The assembly includes a spring 112 to bias the brush seal. And, depending on whether component 18 is the first or second component, the spring 112 biases the seal against or away from the second component. Regarding claim 26, the seal assembly comprises a body 108 and bristles 102. A

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fastener 130 is rigidly mounted on the body and extends into an elongated slot 132 in the second component 18. The fastener can travel within the slot to allow movement of the assembly within the gap between the components 18 and 24.

3. Claims 26, 48, and 50 are rejected under 35 U.S.C. 102(b) as being anticipated by Bouchard (6,170,831).

Bouchard discloses an axial brush seal assembly comprising a body 86/88, bristles 92 extending from the body, a fastener 94 rigidly (in that it's integral) mounted to the body. The fastener extends into and can travel within an elongated slot 96 to allow movement of the assembly within a gap between two components 62 and 48 (see col. 5, lines 19-21). The bristles engage both components.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 16, 17, 20, 38, and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bouchard in view of Ingistov.

Bouchard discloses an axial brush seal assembly and method of sealing a gap comprising a body 94 and bristles 92 extending from the body. The body is positioned in an elongated slot 96 so that the assembly can move (float) axially within a gap between two components 62 and 48 (see col. 4, lines 19-21). The bristles engage both components. Bouchard does not disclose splines and keyways (i.e. rotation prevention). Ingistov discloses an axial brush seal assembly

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having a body 108 and bristles wherein the body is positioned in an elongated slot 116. Ingistov teaches the use of splines 130 (or 128) extending from the body positioned in keyways 132 (or 131) within the slot to prevent rotation of the assembly. The splines can extend radially (fig. 8). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the body and slot of Bouchard with the splines and keyways taught by Ingistov to prevent rotation of the assembly within the slot/gap.

6. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun (5,997,004).

Braun discloses an axial (in that it can seal axially along a surface) brush seal assembly comprising a body 34 and bristles 32. A fastener 70 is adapted to extend into an elongated slot 68 to allow movement of the assembly within a gap between two components. The fastener is removable (see threads) and comprises a plunger assembly (with the spring). However, the fastener is rigidly mounted to component 72, not to the body 34. Reversing the parts such that the fastener is rigidly mounted to the body and extends within a slot in the component is considered a design choice. See *In re Gazda*, 104 USPQ 400 (CCPA 1955). Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to provide the slot in the component and rigidly mount the fastener to the body as a matter of choice in design.

Allowable Subject Matter

7. Claims 14, 15, 24, 25, 44, and 45 are allowed.

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8. Claims 18, 19, 34-37, 40-43, 46, 49, and 51-53 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments filed 5-26-04 have been fully considered but they are not persuasive and are moot in view of the new grounds for rejection.

The bristles of Ingistov are secured to the body in that they held with the body via components such as 108, 120, 130, etc. Also, the slot 116 is elongated transverse to the depth.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alison K. Pickard whose telephone number is 703-305-0882.

The examiner can normally be reached on M-F (10-7:30), with alternate Friday's off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Swann can be reached on 703-306-4115. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Alison K. Pickard
Primary Examiner
Art Unit 3676

AP